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EXAMINER	
LEE, CHUN KUAN	

ART UNIT	PAPER NUMBER
2181	

DATE MAILED: 12/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/706,623	BALASUBRAMANIAN ET AL.	
	Examiner	Art Unit	
	Chun-Kuan (Mike) Lee	2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 September 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

FRITZ FLEMING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100
12/4/2006

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 09/21/2006, in regarding to claims 1-8 and 13-20, have been fully considered but they are not persuasive. Applicant's arguments with respect to claims 9-12 have been considered but are moot in view of the new ground(s) of rejection. Claims 9-12 rejected under 35 U.S.C. 101 and 35 U.S.C. 112 second paragraph are withdrawn. Currently claims 1-20 are pending for examination.

2. In response to applicant's remarks regarding independent claim 9 that whether the preamble forms a positive limitation, as stated on page 7, 2nd paragraph.

Please note that the "initialization of the storage controller" corresponds to the "initialization of the serial port" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

3. In responding to applicant's argument regarding independent claim 1 rejected under 35 U.S.C. 103(a) is not taught by the proposed combination of AAPA and Wood

because the combined teachings does not teach or suggest the claimed feature "the at least serial port parameter is selectable by *an operator*", wherein Wood does not teach the claimed "operator," but rather, Wood teaches a host computer (Wood, Fig. 3, ref. 302); more specifically, "a host computer" is not equal to the claimed "operator," as stated on page 9, 2nd paragraph to page 10, 3rd paragraph. Applicant's argument have fully been considered, but are not found to be persuasive.

Please note that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Further more, as stated in the applicant's remark and in AAPA, the claimed "operator" is actually taught by AAPA; more specifically, "An operator may connect an external device to the serial port of a RAID controller for maintenance, monitoring, or configuration." (AAPA, Specification, p. 2, ll. 15-17 and Remarks, p. 10, ll. 2-3); wherein the external device could be a computer (e.g. laptop computer) (AAPA, Specification, p. 2, ll. 15). Therefore, AAPA's "operator" may then utilize Wood's host computer to connect to the serial port of the RAID controller.

More specific details in regarding to the rejection of the claimed "receiving at least one serial port parameter value for a set of serial port parameters, wherein the at least one serial port parameter is selectable by an operator," is clarified as following.

AAPA teaches a storage network system and method comprising:

a set of serial port parameters values (e.g. bald rate, data bits, priority and flow control (Specification, p. 2, ll. 17-18); and

an operator connecting an external device to a serial port of a RAID controller, wherein the external device may be a laptop computer (Specification, p. 2, ll. 15-17).

Wood teaches a system and a method comprising:

a host computer (Fig. 3, ref. 305) is connected to a subsystem (e.g. RAID system) controller (Fig. 3, ref. 314) utilizing a serial connection (e.g. Serial ATA standard) (Fig. 3, ref. 312) (col. 6, ll. 14-26); and

the host computer may provide the common control and manage functions of the RAID (Fig. 3, ref. 330, 338, 342, 346, 350, 354) by selectively sending a command parameter (e.g. start command) to the subsystem controller through the port controllers (Fig. 3, ref. 316) to initialize and activate the RAID (col. 6, ll. 35-59).

By combining Wood with AAPA, the resulting combination teaches the operator (i.e. taught by AAPA) utilizing the host computer (i.e. taught by Wood) to connect to the serial port of the RAID controller, as the host computer may send serial port parameter value to the RAID controller for the purpose of initialization, such that the operator would then utilized the host computer to select at least one serial port parameters value among the set of serial port parameters values to be transferred.

4. In responding to applicant's argument regarding independent claim 1 rejected under 35 U.S.C. 103(a) is not taught by the proposed combination of AAPA and Wood

because the proposed combination does not teach or suggest "initializing a serial port," as Wood teaches serial ATA (SATA) connection for hard drives, wherein the SATA connection is an entirely distinct connection type from serial port connection, and that the activation of the port controller in Wood is not equivalent to initializing a serial port, as stated on page 10, 4th paragraph to page 11, 1st paragraph. Applicant's arguments have fully been considered, but are found not to be persuasive.

The examiner is relying on the Wood's general teaching regarding that the host computer coupling to the peripheral through the peripheral's controller, wherein the host computer sends a command to the peripheral for the purpose of initialization. The examiner is not expressly relying on the teaching that the interconnection must be a SATA connection; further more, Wood also stated that the utilization of the SATA connection is not a requirement, but rather one of the pluralities of embodiments (Wood, col. 6, ll. 11-17), wherein Wood teaches that the interconnection can be any number of appropriate interfaces, such as, without limitation: Serial ATA, ATA/IDE, SCSI, USB, IEEE-1394 (Firewire), Fiber Channel, iSCSI, etc. Therefore, in combining Wood with AAPA, it would be obvious to implement the host computer sending a serial port parameter value to initialize the serial port; and Wood does not appears to disclose that the utilization of the serial port connection would result in technological failure in implementing Wood's invention.

5. In responding to applicant's argument regarding independent claim 1 rejected under 35 U.S.C. 103(a) that one of ordinary skilled could not combine Wood with AAPA

because Wood utilized SATA connection and AAPA utilized serial port connection, there the two types of connection are radically different; and further more, Wood does not provide Wood's method can be implemented using a serial port, as stated on page 11, 2nd paragraph to page 12, 2nd paragraph. Applicant's arguments have fully been considered, but are found not to be persuasive.

As discussed above, the examiner is not expressly relying on Wood's teaching of utilizing SATA connection, and it appears nowhere in Wood's teaching that precludes the implements of Wood's teaching in serial port connection. Further more, Wood teaches that the implementation of the interconnection can be a number of appropriate interfaces, including serial type interconnections (Wood, col. 6, ll. 11-17).

6. In responding to applicant's argument regarding independent claim 1 rejected under 35 U.S.C. 103(a) that Wood teaches away from the claimed invention because Wood teaches SATA connections for hard disk drives but provides no teaching regarding connecting serial ports to hard disk drives; further more, since SATA connection operates at a faster speed than serial port connection, one of ordinary skill in the art would be motivated to avoid the combination of references, as stated on page 12, 3rd paragraph. Applicant's arguments have fully been considered, but are found not to be persuasive.

As Wood's teaching does not preclude the implementing of the interconnection utilization serial port connection, such that if one were to implement Wood's invention utilizing the serial port connection, the resulting implementation would not be

successful; therefore, Wood does not teach away from the claimed invention. Further more, since SATA connection operates at faster speed than serial port connection, one would be motivated to combine the references, as data/command can be transferred much quicker. It is unclear as to why one of ordinary skill in the art would desire to transfer parameters/data/command slower, if a faster interconnection can be successfully implemented for transferring parameters/data/command much quicker. Furthermore, as the examiner have discussed in detail above, Wood does not require the interconnection to be SATA in order for the Wood's invention for successfully work, nor does Wood disclose the utilization of serial port connection would result in technological failure.

7. In responding to applicant's argument regarding independent claim 1 rejected under 35 U.S.C. 103(a) that no teaching, suggestion, or motivation exists because of Wood and AAPA address different problems, as Wood provide a solution to the problem of speeding up spin-up of disk drives and AAPA provides a solution to initialize serial port, as stated on page 12, 4th paragraph to page 13, last paragraph. Applicant's arguments have fully been considered, but are found not to be persuasive.

Wood actually provide a solution for greater control of spin-up times of the ATA disk drives, so that inexpensive array of ATA disk drives may be more effectively used in multi-drive array (Wood , col. 2, ll. 57-59), rather than providing a solution to speeding up spin-up of disk drives. Therefore, Wood provides solution to give greater control of the peripheral such that the host computer sends a command to the peripheral for the

purpose of initialization of the peripheral in regarding to the spin-up of the peripheral. And, as the examiner has discussed above, the examiner is relying on Wood's general teaching regarding that the host computer coupling to the peripheral through the peripheral's controller, wherein the host computer sends a command to the peripheral for the purpose of initialization. Therefore, Wood's general teaching would provide the solution for spin-up times of the ATA disk drives, and the initialization of serial port, such as the operator utilizing the host computer (i.e. external device) to send the command parameter to the peripheral for the purpose of initialization, wherein the command parameter initializes the serial port. Further more, Wood and AAPA both address initialization issues associated with the RAID system. Therefore, the combination of Wood with AAPA would be motivated to provide a greater control of the peripheral (e.g. RAID system) such that the spin-up of the disk drive can be initialized, wherein such implementation may be utilized for the initialization of the corresponding to the peripheral's serial port.

8. In responding to applicant's argument regarding independent claim 1 rejected under 35 U.S.C. 103(a) that the examiner has not stated a proper teaching, suggestion, or motivation to combine Wood with AAPA because of the plurality of arguments that applicant have presented above, and also that the examiner has only presented a proposed advantage; and further more, the applicant presented an example as following:

first reference teaches the use of lasers to achieve nuclear fusion.

second reference teaches the use of ultra-high power laser deliver more energy.

however, one of ordinary skilled would be motivated to avoid combining the reference because of the extreme expense of ultra-high power laser, therefore, even if an advantage is recognized, one ordinary skilled in the art is motivated to avoid the combination, as stated on page 14, 1st paragraph to 3rd paragraph. Applicant's arguments have fully been considered, but are found not to be persuasive.

The motivation presented by the examiner is clearly stated by Wood, as the motivation is to provide a solution for greater control of spin-up times of the ATA disk drives, so that inexpensive array of ATA disk drives may be more effectively used in multi-drive array (Wood , col. 2, ll. 57-59), therefore, the "advantage" is the motivation for combination; and in regarding to the plurality of arguments that applicant have presented thus far, please see the examiner response in detail above.

As for the example that the applicant has presented, it is unclear as to what the applicant considered the desired "invention" to be, therefore, the examiner assumes that the "invention" under consideration is to implement "a ultra-high power laser that is more useful in achieving nuclear fusion", then one ordinary skilled would be motivated to combined the second reference with the first reference, as the extreme expense of the ultra-high power laser does not technologically preclude the success of implementing the "invention". On the other hand, if the first reference further discloses that that use of ultra-high power laser can not achieving nuclear fusion, then one ordinary skilled would be motivated to avoid the combination of the second reference with the first reference, as such combination would result in failure of achieving nuclear fusion, and further

more, the "invention" under consideration would then be in question as to the actual success in the implementing "a ultra-high power laser that is more useful in achieving nuclear fusion."

9. In response to applicant's argument regarding independent claim 1 rejection that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, as applicant appears to reiterate the plurality of arguments already presented above to conclude that the examiner uses his personal opinion rather than using the actual teaching of know prior art for rejection; further more, applicant argued that Wood is clearly inappropriate given the citation only refers to SATA connection and not to serial ports, as stated on page 14, last paragraph to page 15, 2nd paragraph. Applicant's arguments have fully been considered, but are found not to be persuasive.

Please note that it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Further more, please see the examiner's response for detail regarding the plurality of arguments already presented by the applicant thus far, such as exactly which aspect of Wood's teaching the examiner is relying on, and Wood's teaching clearly does not only refer to SATA connection, as discussed above.

10. In responding to applicant's argument regarding independent claim 1 rejected under 35 U.S.C. 103(a) that Wood is non-analogous art, because Wood is not either in AAPA's field of endeavor, or reasonably pertinent to he particular problem with which the inventor is concern; more specifically, Wood is not in AAPA's field of endeavor because Wood is in the field of increasing the speed of hard drives and AAPA's field of serial port initialization, as stated on page 15, 3rd paragraph to page 16, 2nd paragraph. Applicant's arguments have fully been considered, but are found not to be persuasive.

Wood and AAPA are analogous, because Wood would be in the AAPA's field of endeavor, as Wood's invention is solving a problem associated with the RAID system for initializing the RAID system, wherein the initialization is associated with the spin-up of the disk drives (Wood, col. 6, ll. 26-35), as AAPA intent to solve a problem in the RAID system associated with initialization, wherein the initialization is associated with the peripheral's serial port.

11. In responding to applicant's argument regarding independent claim 2 rejected under 35 U.S.C. 103(a) that the propose combination of AAPA, Wood and Farrand does not teach all the features of the claims, because Farrand does not teach or suggest initialization of a serial port using a GUI or any other method, as stated on page 18, 1st paragraph. Applicant's arguments have fully been considered, but are found not to be persuasive.

As the examiner discussed in detail above, AAPA and Wood does teach the initialization of a serial port. Farrand further teaches the utilizing of GUI (i.e. subsystem configuration button) for the purpose of implementing configuration, as all the buttons are associated with various configurations (Farrand, Fig. 11, ref. 516, 518, 520, 528). Therefore, by combining Farrand with AAPA and Wood the resulting combination teaches utilizing the GUI for the purpose of implementing configuration associated with the initialization of the serial port.

12. In responding to applicant's argument regarding independent claim 2 rejected under 35 U.S.C. 103(a) applicant appears to argue that AAPA, Wood and Farrand are non-analogous art, as applicant cited *In re Oetiker*, and further emphasized that Farrand solves a different problem than AAPA and Wood, as stated on page 18, 2nd paragraph. Applicant's arguments have fully been considered, but are found not to be persuasive.

Please note that it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Farrand's GUI is implemented on a computer (e.g. management station/counsel) coupled to a plurality of disk storage system for configuring the plurality of disk storage system, where as, AAPA and Wood teaches a host computer coupled to a plurality of disk drives (e.g. disk storage system) for initializing (configuring) the serial port.

13. In responding to applicant's argument regarding independent claim 4 rejected under 35 U.S.C. 103(a) that the proposed combination of AAPA, Wood and Harrington does not teach all the features of the claims, because Harrington does not teaches or suggest initializing a serial port before receiving the at least one serial port parameter values from the host device, as stated on page 20, 2nd paragraph to 4th paragraph. Applicant's arguments have fully been considered, but are found not to be persuasive.

The claimed limitation as stated for claim 4 requires "... wherein receiving at least one serial port parameter value including authenticating an operator of the host device before receiving the at least one serial port parameter value from the host device..." it is unclear to the examiner where the claim limitations require "initializing a serial port before receiving the at least one serial port parameter values from the host device," on the contrary, it appears that the initialization of the serial port is after the receiving the at least one serial port parameter values from the host device, as disclosed in independent claim 1. Therefore, it appears unclear to the examiner as to which claimed limitations the applicant's argument is applied. As for the claimed limitation "initialization a serial port" being taught by the combined teaching of AAPA and Wood, please view the examiner's detailed discussion above.

14. In responding to applicant's argument regarding independent claim 4 rejected under 35 U.S.C. 103(a) that no teaching, suggestion, or motivation because AAPA, Wood and Harrington are non-analogous art, as applicant has cited *In re Oetiker*, as

AAPA is directed to serial port initialization, Wood is directed to the problem of speeding up spin of disk drives and Harrington is directed to user authentication in the context of smart paper, therefore the references address completely distinct subject matter, as stated on page 20, last paragraph to page 21, last paragraph. Applicant's arguments have fully been considered, but are found not to be persuasive.

Please view examiner detail response above in regarding to the AAPA and Wood being analogous art. Further more, please note that the examiner is not relying on Harrington's teaching directing to the user authentication in the context of smart paper, but rather the background disclosure by Harrington that a user attempt to gain access to a system (e.g. computer) by entering a secret password and a personal user name or identification number, and after proper verification that the entered information are correct, the user is granted access (Harrington, col. 1, ll. 30-45).

By combining Harrington's user authentication into AAPA and Wood's storage network system and method, such as in the storage controller; the resulting combination teaches the operator to entering the secret password and the personal user name or identification number, and after proper verification that the entered information are correct, the operator is granted access to the RAID system as the at least one serial port parameter values is received from the host computer.

The motivation for the combination of Harrington with AAPA and Wood is to provide security measures to ensure granting of access to only those individuals who are authorized (Harrington, col. 1, ll. 30-33), which is also taught by Harrington's background disclosure.

15. In responding to applicant's argument regarding independent claim 6 rejected under 35 U.S.C. 103(a) that the combined teaching of AAPA, Wood and Walter do not teach the claimed feature of "performing an *adaptive* bald rate negotiation between the storage controller and an external device connected to the storage controller through the serial port," because Walter does not teach "adaptive baud rate negotiation," such that the "adaptive baud rate negotiation" uses time value and break characters in concert with the UART to establish baud rate negotiation, as stated on page 23, 3rd paragraph to page 25, 1st paragraph. Applicant's arguments have fully been considered, but are found not to be persuasive.

Please note that the features upon which applicant relies (i.e., using time value and break characters in concert with the UART to establish baud rate negotiation) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Further more, the setting of the baud rate would be adaptively negotiated, as stated in the applicant's remark: "

"identifying a baud rate,

checking to see if the identified baud rate is correct,

setting a new baud rate if the identified baud rate is not correct,

checking the new baud rate, and

then iteratively setting a baud rate and checking baud rate until the correct baud rate is achieved." (applicant's remarks, p. 23, last paragraph)

as the correct baud rate is adaptively negotiated through the iteration of setting and checking.

16. In regarding to applicant's arguments that the examiner use of impermissible hindsight throughout all obvious rejections and utilized a plethora of references for the plethora of rejections, as stated on page 27, 4th paragraph to page 28, 2nd paragraph.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to applicant's argument that the examiner has combined an excessive number of references, reliance on a large number of references in a rejection does not, without more, weigh against the obviousness of the claimed invention. See *In re Gorman*, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991).

17. In regarding to all dependent claims 2-8 and 14-20 which the applicant argued to be patentable due to the patentability of the independent claims 1 and 13. As examiner has responded to all applicant's arguments, pertaining to the independent claims 1 and 13 currently would not be patentable; therefore, the dependent claims 2-8 and 14-20 are rejected at least due to direct or indirect dependency on the rejected independent claims 1 and 13.

18. In responding to all applicant's arguments associated with claims 1-8 and 13-20 in detail above, the examiner will maintain his positions regarding the rejections of the claims 1-8 and 13-20 in detail below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

19. Claims 1, 3, 5, 13, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admit prior Art (AAPA) in view of Wood et al. (PS Patent 6,915,363).

20. As per claims 1 and 13, AAPA teach a storage network system and method, comprising:

a storage system (disk subsystem) (Specification, page 2, ll. 9-10);

a storage controller (disk/RAID controller), wherein the storage controller provides access to the storage system (storage system comprising of two or more hard disks) (Specification, page 2, ll. 10-12) and wherein the storage controller has a serial port (Specification, page 2, ll. 14-15); and

an external device, electrically coupled to the storage controller through the serial port (Specification, page 2, ll. 14-15),

wherein the storage controller have a plurality of serial port parameter settings including baud rate, data bits, stop bits, priority and flow control (Specification, page 2, ll. 17-18).

AAPA does not teach the storage network system and method, comprising wherein the storage controller receives at least one serial port parameter value for a set of serial port parameters, wherein the at least one serial port parameter is selectable by an operator; and initializes the serial port on the storage controller using the received serial port parameter values.

Wood teaches a system and a method comprising a subsystem controller (Fig. 3, ref. 314) providing access to a storage system comprising a plurality of disk drives (Fig. 3, ref. 330, 338, 342, 346, 350, 354) over a serial connection (conforming to the serial ATA standard), wherein a host computer (Fig. 3, ref. 302) selects and sends a start command and when the subsystem controller receives the start command, the port controller (Fig. 3, ref. 324, 326) is activated utilizing the start command (col. 6, ll. 35-59 and col. 9, ll. 14-35).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Wood's start command into AAPA's plurality of serial port parameter settings. The resulting combination of the references teaches the storage network system and method further comprising wherein the plurality of serial port parameter settings including start command, baud rate, data bits, stop bits, priority and flow control; the host (operator) selecting and sending the start command; and the subsystem controller receives and utilizes the start command to activate (initialize) the port controller, wherein the port controller operates in accordance to the serial ATA standard, therefore the port controller is a serial port controller.

Therefore, it would have been obvious to combine Wood with AAPA for the benefit of proper communication between the host and the peripheral utilizing out-of-band (OOB) signaling, and further more, providing greater control in initializing the inexpensive array of ATA disk drives (Wood, Abstract and col. 2, ll. 51-59).

21. As per claims 3 and 15, AAPA and Wood teach all the limitations of claims 1 and 13 as discussed above, where Wood further teaches the storage network system and method, comprising:

a host device (Wood, Fig. 3, ref. 302), electrically coupled to the storage controller (Wood, Fig. 3, ref. 312, 314),

wherein the storage controller receives the at least one serial port parameter value (start command) from the host device (Wood, col. 6, ll. 35-59), wherein upon the

subsystem controller receiving the start command, the subsystem controller further transfer the start command to the corresponding port controller.

22. As per claims 5 and 17, AAPA and Wood teach all the limitations of claims 1 and 13 as discussed above, where AAPA further teaches the storage network system and method, comprising wherein the set of serial port parameters includes at least one of a baud rate, a number of data bits, a number of stop bits, a parity and a flow control (AAPA, Specification, page 2, ll. 17-18).

23. Claims 2 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA and Wood et al. (PS Patent 6,915,363), and further in view of Farrand et al. (US Patent 5,559,958).

AAPA and Wood teach all the limitation of claims 1 and 13 as discussed above, wherein Wood further teaches the storage network system and method, comprising a plurality of mode of communication options including communication conforming to serial ATA, USB, Firewire and Fiber Channel (Wood, col. 6, ll. 15-18 and col. 7, ll. 17-19).

AAPA and Wood does not expressly teach the storage network system and method, comprising: wherein the storage controller receives the at least one serial port parameter value by presenting a boot menu, wherein the boot menu includes a serial console mode, receiving a user selection of a serial console mode, presenting the serial

console mode, and receiving operator selection of at least one serial port parameter value in the serial console mode.

Farrand teaches a graphic user interface (GUI) for computer management system and method comprising:

displaying to a user a file server menu, wherein the file server menu includes a engineering server subsystem (Fig. 10);

receiving a user selection of the engineering server subsystem (Fig. 10-11);

presenting the engineering server subsystem (Fig. 11);

receiving the user selectively depressing one of the engineering server subsystem button comprising a configuration subsystem button (Fig. 11, ref. 516), an input/output subsystem button (Fig. 11, ref. 528), a disk storage subsystem button (Fig. 2111, ref. 520) and a security configuration subsystem button (Fig. 11, ref. 518) (Fig. 11 and col. 197, ll. 1-14).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Farrand's GUI menu into AAPA and Wood's storage network system and method. The resulting combination of the references teaches the storage network system and method further comprising:

displaying to the user an initialization menu, wherein the initialization menu includes the serial ATA communication mode;

receiving the user selection of the serial ATA communication mode;

presenting the serial ATA communication mode, wherein the serial ATA communication mode comprises the plurality of serial port parameter settings including start command, baud rate, data bits, stop bits, priority and flow control; and

receiving the user selecting of at least one serial port parameter value in the serial communication mode comprising the start command.

Therefore, it would have been obvious to combine Farrand with AAPA and Wood for the benefit of providing a GUI interface which enable the user/operator to easily select the available options/functions rather than requiring complex typing of commands to implement the desire functionalities.

24. Claims 4 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA and Wood et al. (PS Patent 6,915,363), and further in view of Harrington (US Patent 6,480,958).

As per claims 4 and 16, AAPA and Wood teach all the limitation of claims 3 and 15 as discussed above.

AAPA and Wood does not expressly teach the storage network system and method, further comprising wherein the storage controller has a hard-coded password for authenticating an operator of the host device before receiving the at least one serial port parameter values from the host device.

Harrington teaches a system and a method comprising a user entering the information comprising a secret password and a personal user name or identification

number and verifying the entered information is correct before granting access to the user (col. 1, ll. 30-45).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Harrington's entering and verification of the secret password and the personal user name or identification number into AAPA and Wood's storage network system and method. The resulting combination of the references teaches the storage network system and method further comprising the user/operator to enter the information comprising the secret password and the personal user name or identification number and verifying the entered information is correct before enabling the receiving of the start command send by the user/operator.

Therefore, it would have been obvious to combine Harrington with AAPA and Wood for the benefit of providing security measures to ensure the receiving of the serial port parameter settings only from authorized user/operator (Harrington, col. 1, ll. 30-33).

25. Claims 6-8 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA and Wood et al. (PS Patent 6,915,363), and further in view of Walter et al. (US Patent 6,847,615).

26. As per claims 6 and 18, AAPA and Wood teach all the limitation of claim 1 and 13 as discussed above, where AAPA further teaches the storage network system and method, comprising:

wherein the set of serial port parameters includes baud rate (AAPA, Specification, page 2, ll. 17-18); and

wherein the serial port parameter including baud rate is invoked as the user utilizing a break key sequence (AAPA, Specification, page 2, l. 28 to page 3, l. 1).

AAPA and Wood does not teach the storage network system and method, comprising wherein receiving at least one serial port parameter value includes the external device performing an adaptive baud rate negotiation between the storage controller and the external device.

Walter teaches a system and a method for baud rate detection for serial data comprising the negotiating the baud rate of the transferring data by utilizing the function of setting a receiving device (storage device) to a correct baud rate for receiving data (col. 2, ll. 8-15), wherein the data received comprises of a predetermined data word, such as one of the character 'A' or 'a', and the next character in the serial data transmission may be 'T' or 't' (col. 2, ll. 49-52 and col. 6, ll. 43-49).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Walter's function for setting the correct baud rate into AAPA and Wood's storage device. The resulting combination of the references teaches the storage network system and method further comprising the user utilizing the external device to send the predetermined data word comprising the break key sequence to enable the storage device to implement the function setting the correct baud rate for receiving data.

Therefore, it would have been obvious to combine Walter with AAPA and Wood for the benefit of providing the automatic determination of baud rate for the serial data transmission (Walter, Abstract and col. 2, ll. 1-2).

27. As per claims 7 and 19, AAPA, Wood and Walter teach all the limitation of claims 6 and 18 as discussed above, where AAPA and Walter further teach the storage network system and method, comprising:

wherein the external device performs an adaptive baud rate negotiation by sending a break key sequence from the external device to the storage controller (AAPA, Specification, page 2, l. 28 to page 3, l. 1 and Walter, col. 2, ll. 49-52),

determining an amount of time between a start bit and a stop bit (Walter, col. 4, ll. 37-61 and col. 9, ll. 12-17), wherein the processor must determine the amount of time between the start bit and the stop bit in order to program the timer to generate a interrupt, and

obtaining a baud rate based on the amount of time (Walter, col. 9, ll. 18-45), wherein the baud rate is determined base on the interrupt generated by the timer and the processor's detection of the priority bit.

28. As per claims 8 and 10, AAPA, Wood and Walter teach all the limitation of claims 7 and 19 as discussed above, where Walter further teaches the storage network system and method, comprising wherein the external device obtains a baud rate based on the

amount of time includes performing a look-up of the baud rate in a look-up table (Walter, col. 2, ll. 55-58 and col. 6, ll. 43-49).

29. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Krulce (US Patent 6,072,827).

AAPA teaches a method of performing an adaptive baud rate negotiation for serial port initialization in a storage controller, wherein the storage controller (disk/RAID controller) includes a serial port for connection to an external device (Specification, page 2, ll. 14-15), the method comprising sending a break key sequence from the external device to the storage controller (AAPA, Specification, page 2, l. 28 to page 3, l. 1), wherein the user invoke the break key sequence to cycle through baud rate values for the serial port;

AAPA does not teach the method comprising:

determining an amount of time between a start bit and a stop bit;

obtaining a first baud rate based on the amount of time; and

setting a second baud rate for the serial port based on the first baud rate.

Krulce teaches a system and a method comprising:

determining a number of counts between a start bit and a stop bit (Fig. 4, ref. 134, 146, 152 and col. 6, ll. 44-50);

a initial baud rate (Fig. 4, ref. 130) is incremented (Fig. 4, ref. 156) / decremented (Fig. 4, ref. 162) to obtain a first baud rate base on the number of count determined between the start bit and the stop bit (Fig. 4 and col. 6, l. 50 to col. 7, l. 9); and

the first baud rate is incremented (Fig. 4, ref. 156) / decremented (Fig. 4, ref. 162) to obtain and set a second bald rate as the transmitting device and the receiving device agrees on the baud rate as of the second attempt (Fig. 4 and col. 7, ll. 10-44).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Krulce's baud rate setting into AAPA's method.

Therefore, it would have been obvious to combine Krulce with AAPA for the benefit of implementing a low-cost receiving device for determining of the correct baud rate between the transmitting device and the receiving device for serial communication (Krulce, col. 2, ll. 25-50).

30. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA and Krulce (US Patent 6,072,827), and further in view of Walter et al. (US Patent 6,847,615).

AAPA and Krulce teach all the limitations of claim 9 as discussed above, where Krulce further teach the method comprising the utilization of a state diagram a binary search method selecting a baud rate from a set of conventional baud rates (Krulce, Fig. 3 and col. 5, ll. 27-30).

AAPA and Krulce does not teach the use of a look-up table to determine the baud rate.

Walter teaches the method comprising the use of a look-up table for determining a corresponding baud rate (col. 2, ll. 55-58 and col. 6, ll. 43-49).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Walter's look-up table into AAPA and Krulce's state diagram.

Therefore, it would have been obvious to combine Walter with AAPA and Krulce for the benefit of providing the automatic determination of baud rate for the serial data transmission (Walter, Abstract and col. 2, ll. 1-2).

31. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA and Krulce (US Patent 6,072,827), and further in view of Hollingsworth.

AAPA and Krulce teach all the limitation of claim 9 as discussed above.

AAPA and Krulce does not teach the method comprising

resending the break key sequence responsive to a timeout condition; and

repeating the sending, determining, and obtaining steps until a timer expires.

Hollingsworth teaches the communication between a transmitter and a receiver, wherein if the Disconnect Request (DR), send by the transmitter, is not acknowledged by the receiver, the transmitter resend the DR due to a timeout condition (page 7, Fig. (c)) and if the DR is not acknowledged after a period of time of N timeout conditions, the transmitter stops the resending of the DR (page 7, Fig. (d)).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Hollingsworth's timeout condition into AAPA and Krulce's method for the adaptive baud rate negotiation. The resulting combination of the references teaches the method further comprising the retransmission of the break key

sequence if the correct baud rate is unable to be obtained when the timeout condition occurs and if the correct baud rate is unable to be obtained after the time period of N timeouts, which may result in the expiration of a timer, the attempt to obtain the correct baud rate stops.

Therefore, it would have been obvious to combine Hollingsworth with AAPA and Krulce for the benefit of proper detection if there is a failure in the attempt to obtain the proper baud rate for communication.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun-Kuan (Mike) Lee whose telephone number is (571) 272-0671. The examiner can normally be reached on 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fritz M. Fleming can be reached on (571) 272-4145. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

C.K.L.
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